UNITED STATES DEPARTMENT OF COMMERCE United States Patent and Trademark Office Address: COMMISSIONER FOR PATENTS P.O. Box 1450 Alexandria, Virginia 22313-1450 www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/711,611	09/28/2004	Tatsuya Kawakami	S1C-04-032	5610
29863 DELAND LAW	7590 09/08/201 V OFFICE	EXAMINER		
P.O. BOX 69	VED CA 06050 0060	LUONG, VINH		
KLAMATH RIVER, CA 96050-0069			ART UNIT	PAPER NUMBER
			3656	
			NOTIFICATION DATE	DELIVERY MODE
			09/08/2010	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

bdeland1992@gmail.com jdeland@sisqtel.net

		Application No.	Applicant(s)			
Office Action Summary		10/711,611	KAWAKAMI, TATSUYA			
		Examiner	Art Unit			
		Vinh T. Luong	3656			
	The MAILING DATE of this communication appears on the cover sheet with the correspondence address Period for Reply					
A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION. - Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication. - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication. - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).						
Status						
1)⊠ Resn	onsive to communication(s) filed on <u>22 Ju</u>	ine 2010				
· · · · · · · · · · · · · · · · · · ·	This action is FINAL . 2b) ☐ This action is non-final.					
/ 	Since this application is in condition for allowance except for formal matters, prosecution as to the merits is					
•	closed in accordance with the practice under Ex parte Quayle, 1935 C.D. 11, 453 O.G. 213.					
diology in accordance with the practice and the expanse against, 1000 C.B. 11, 400 C.B. 210.						
Disposition of	Claims					
4)⊠ Claim	☑ Claim(s) <u>1,3-24 and 26-28</u> is/are pending in the application.					
4a) Of	4a) Of the above claim(s) is/are withdrawn from consideration.					
5)∐ Claim	(s) is/are allowed.					
6)⊠ Claim	6)⊠ Claim(s) <u>1,3-24 and 26-28</u> is/are rejected.					
7)∐ Claim	(s) is/are objected to.					
8)∐ Claim	(s) are subject to restriction and/or	election requirement.				
Application Papers						
9)∐ The sr	pecification is objected to by the Examine	r.				
10)⊠ The drawing(s) filed on <u>22 June 2010</u> is/are: a)⊠ accepted or b)□ objected to by the Examiner.						
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).						
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).						
11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.						
Priority under	35 U.S.C. § 119					
 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f). a) All b) Some * c) None of: 1. Certified copies of the priority documents have been received. 2. Certified copies of the priority documents have been received in Application No. 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)). * See the attached detailed Office action for a list of the certified copies not received. 						
2) Notice of Dra	ferences Cited (PTO-892) uftsperson's Patent Drawing Review (PTO-948) Disclosure Statement(s) (PTO/SB/08) Mail Date	4) Interview Summary Paper No(s)/Mail Da 5) Notice of Informal P 6) Other:	ite			

1. The amendment filed on June 22, 2010 has been entered.

2. Claim 22 is withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected species. There is no allowable generic or linking claim. Election was

made without traverse in the reply filed on January 16, 2008.

3. The drawings were received on June 22, 2010. These drawings are accepted by the

Examiner.

4. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode

contemplated by the inventor of carrying out his invention.

5. Claims 1, 3-21, 23, 24, and 26-28 are rejected under 35 U.S.C. 112, first paragraph, as

failing to comply with the written description requirement. The claim(s) contains subject matter

which was not described in the specification in such a way as to reasonably convey to one skilled

in the relevant art that the inventor(s), at the time the application was filed, had possession of the

claimed invention.

Amended claim 1 recites: "wherein the biasing force is always applied to the first

engaging member as the second engaging member moves through the entire range of operating

movement of the second engaging member in the first and second directions."

New claim 27 recites: "wherein *only* a biasing force that biases the first engaging member

towards the second engaging member is applied to the first engaging member."

New claim 28 recites: "wherein at least one of the first biasing location or the second

biasing location is positioned between the axle and the location where the first engaging member

engages the second engaging member." (Emphasis added).

Applicant has not pointed out where the new or amended claims are supported, nor does there appear to be a written description of the above claim limitations in the application as filed. See MPEP §§ 2163.01, 2163.04, and 2163.06.

- 6. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
- 7. Claim 28 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

It is unclear whether a confusing variety of terms, such as, "the location of the application of the biasing force from the first biasing location" and "the location where the first engaging member engages the second engaging member" in claim 28 refer to the same or different locations. See MPEP 608.01(o) and double inclusion in MPEP 2173.05(o). Applicant is respectfully suggested to identify each claimed feature with reference to the elected species of FIGS. 5-6B.

8. Claims 1, 3-21, 23, 24, 26, and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Troiano (US 6,105,459) in view of Scanland et al. (US 6,497,163).

Claim 1

Troiano teaches an apparatus comprising:

- a first engaging member 32;
- a movable second engaging member 20 that moves in a first (released) direction and in a second (applied) direction opposite the first direction (FIGS. 3 and 5); wherein the first engaging member 32 engages the second engaging member 20; and

a biasing mechanism 45, 46, 48, 52, 54 (Troiano 3:1-14) that applies a biasing force (45) to bias the first engaging member 32 at a first biasing location (FIG. 4, *i.e.*, a high tension, applied position; Troiano 2:3-5) on the first engaging member 32 so that the first engaging member 32 engages the second engaging member 20;

wherein, while the first engaging member 32 engages the second engaging member 20 and the second engaging member 20 moves, the biasing mechanism 45, 46, 48, 52, 54 is capable of changing the location of the application of the biasing force from the first biasing location (FIG. 4) on the first engaging member 32 to a different second biasing location (FIG. 3, *i.e.*, a low tension, released position; Troiano 1:66-2:2) on the first engaging member 32 so that an engaging force applied between the first engaging member 32 and the second engaging member 20 when the biasing mechanism 45, 46, 48, 52, 54 applies the biasing force to the second biasing location (FIG. 3) is less than the engaging force applied between the first engaging member 32 and the second engaging member 20 when the biasing mechanism 45, 46, 48, 52, 54 applies the biasing force to the first biasing location.

Troiano's apparatus is capable of performing the claimed function:

"wherein, while the first engaging member engages the second engaging member and the second engaging member moves, the biasing mechanism changes the location of the application of the biasing force from the first biasing location on the first engaging member to a different second biasing location on the first engaging member so that an engaging force applied between the first engaging member and the second engaging member when the biasing mechanism applies the biasing force to the second biasing location is less than the engaging force applied between the first engaging member and the second engaging member when the biasing mechanism applies the biasing force to the first biasing location;"

In fact, by comparing Applicant's FIG. 5 and Troiano's FIGS. 2-5, Troiano's cam 48 slides (changes the location) on Troiano's first engaging member 32 in the same manner as Applicant' interface member 212 that slides or changes the location on Applicant's first engaging member 41, and Troiano's spring 45 biases Troiano's cam 48 in the same manner as Applicant's spring 208 that biases Applicant's interface member 212. (<u>Troiano</u> 3:15 – 4:9 and claims 1-3).

Troiano teaches the invention substantially as claimed. However, Troiano's biasing force (45) is not always applied to the first engaging member as the second engaging member moves through the entire range of operating movement of the second engaging member in the first and second directions.

Scanland teaches the biasing force 116 (FIGS. 9 and 10) or 142 (FIGS. 12-14) always applied to the first engaging member 106/135 as the second engaging member 101, 102/125, 140, 141 moves through the entire range of operating movement of the second engaging member 101, 102/125, 140, 141 (Scanland 7:12-31; 8:33-9:10) in the first and second (engaged and disengaged) directions in order to improve the control of the apparatus 21 (Scanland 1:31-2:18).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to always apply the biasing force to Troiano's first engaging member as Troiano's second engaging member moves through the entire range of operating movement of Troiano's second engaging member in the first and second directions in order to improve the control of Troiano's apparatus as taught or suggested by Scanland. The always application of biasing force to Troiano's first engaging member as taught or suggested by Scanland would not have been uniquely challenging to a person of ordinary skill in the art because it is no more than

"the simple substitution of one known element for another or the mere application of a known technique to a piece of prior art ready for the improvement" *KSR Int'l. Co. v. Teleflex Inc.*, 127 S. Ct. 1727, 1741 (2007) and it "does no more than yield predictable results." *KSR* at 1739. See also *stare decisis* regarding reversal of parts in MPEP § 2144.04.

Claim 3

Troiano's second engaging member 20 comprises a positioning unit 20. Referring the second engaging member to a merely inferentially included element or an intended use element, such as, a bicycle shift control device is not accorded patentable weight. As noted, a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then, it meets the claim. *In re Casey*, 370 F.2d 576, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 312 F.2d 937, 939, 136 USPQ 458, 459 (CCPA 1963). On the other hand, it is well settled that the claims drawn to an apparatus must distinguish from prior art in terms of structure rather than function. *In re Schreiber*, 44 USPQ2d 1429 (Fed. Cir. 1997); *In re Danly*, 120 USPQ 528 (CCPA 1959); *Ex parte Masham*, 2 USPQ2d 1647 (BPAI 1987) and MPEP § 2114.

Claim 4

Troiano's first engaging member 32 comprises a positioning member 32 that engages the positioning unit 20 to maintain the positioning unit 20 in a selected position.

Claim 5

Troiano's biasing mechanism 45, 46, 48, 52, 54 applies the biasing force to the positioning member 32.

Claim 6

Troiano's positioning member 32 and biasing mechanism 45, 46, 48, 52, 54 move relative to the other to reduce the biasing force when the positioning unit 20 moves. (Troiano 3:15-4:9)

Claim 7

Troiano's positioning member 32 moves in response to movement of the positioning unit.

Claim 8

Troiano's positioning member 32 moves or is capable of moving relative to the biasing mechanism 45, 46, 48, 52, 54 when the positioning unit 20 moves so that the biasing mechanism 45, 46, 48, 52, 54 applies the biasing force to the different biasing location.

Claim 9

Troiano's positioning member 32 moves or is capable of moving together with the positioning unit 20 when the positioning unit 20 moves.

Claim 10

The movement of Troiano's positioning member 32 causes the biasing mechanism 45, 46, 48, 52, 54 to apply the biasing force to the different biasing location.

Claim 11

Troiano's positioning unit 20 comprises a plurality of positioning teeth 30, and wherein the positioning member 32 comprises a positioning pawl 32 that engages selected ones of the plurality of positioning teeth 30 to maintain the positioning unit 20 in the selected position.

Claim 12

Troiano's positioning unit 20 and positioning pawl 32 move relative to each other so that the positioning pawl 32 moves over at least one of the plurality of positioning teeth 30, and wherein the biasing mechanism 45, 46, 48, 52, 54 applies the biasing force to the different second biasing location so that the biasing force is reduced when the positioning member 32 moves over the at least one of the plurality of positioning teeth.

Claim 13

Troiano's biasing mechanism 45, 46, 48, 52, 54 increases or is capable of increasing the biasing force to the positioning member 32 after the positioning member 32 moves over the at least one of the plurality of positioning teeth 30.

Claim 14

Troiano's biasing mechanism 45, 46, 48, 52, 54 applies or is capable of applying the biasing force to substantially the same biasing location before and after the positioning member 32 moves over the at least one of the plurality of positioning teeth.

Claim 15

Troiano's positioning pawl 32 moves or is capable of moving relative to the biasing mechanism 45, 46, 48, 52, 54 when the positioning unit 20 moves so that the biasing mechanism 45, 46, 48, 52, 54 applies the biasing force to the different second biasing location.

Claim 16

Troiano's positioning pawl 32 moves or is capable of moving together with the positioning unit 20 when the positioning unit 20 moves.

Claim 17

The movement of Troiano's positioning member 32 causes the biasing mechanism 45, 46, 48, 52, 54 to apply the biasing force to the different second biasing location (FIGS. 2-5).

Claim 18

Troiano's mounting member 24 supports the positioning unit 20 and the positioning pawl 32, and wherein the biasing mechanism 45, 46, 48, 52, 54 is secured relative to the mounting member 24.

Claim 19

Troiano's positioning unit 20 rotates to move the positioning pawl 32.

Claims 20 and 21

Troiano's biasing mechanism 45, 46, 48, 52, 54 comprises a coil spring 45.

Claim 23

The movement of Troiano's second engaging member 20 is capable of causing the biasing mechanism 45, 46, 48, 52, 54 to reduce the biasing force applied to the first engaging member 32. It is well settled that the "wherein" or "whereby" clause that merely states the inherent results of limitations in the claim adds nothing to the claim's patentability or substance. Texas Instruments Inc. v. International Trade Commission, 26 USPQ2d 1018 (Fed. Cir. 1993); Griffin v. Bertina, 62 USPQ2d 1431 (Fed. Cir. 2002); and Amazon.com Inc. v. Barnesand-noble.com Inc., 57 USPQ2d 1747 (Fed. Cir. 2001).

Claim 24

The biasing force applied by Troiano's biasing mechanism 45, 46, 48, 52, 54 is capable of changing from a first value to a second value while the second engaging member 20 is moving

and the first engaging member 32 is contacting the second engaging member 20. Texas Instruments Inc. v. International Trade Commission, supra.

Claim 26

Troiano's positioning member 32 moves around a rotational axis 26 of the positioning unit 20 (by a lost motion linkage 31 and 36).

Claim 27

See claim 1 above. Further, note that Scanland teaches only the biasing force 142 (FIGS. 12-14) that biases the first engaging member 135 toward the second engaging member 125, 140, 141 being applied to the first engaging member 135 in order to improve the control of Scanland's apparatus 21. (Scanland 8:33-9:10)

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use only the biasing force that biases the first engaging member toward the second engaging member being applied to the first engaging member in order to improve the control of Troiano's apparatus as taught or suggested by Scanland. *KSR*.

9. Claims 1 and 27 are further rejected under 35 U.S.C. 103(a) as being unpatentable over Troiano in view of Dal Pra (US 6,792,826).

Claim 1

Troiano teaches an apparatus comprising:

- a first engaging member 32;
- a movable second engaging member 20 that moves in a first (released) direction and in a second (applied) direction opposite the first direction (FIGS. 3 and 5); wherein the first engaging member 32 engages the second engaging member 20; and

a biasing mechanism 45, 46, 48, 52, 54 (Troiano 3:1-14) that applies a biasing force (45) to bias the first engaging member 32 at a first biasing location (FIG. 4, *i.e.*, a high tension, applied position; Troiano 2:3-5) on the first engaging member 32 so that the first engaging member 32 engages the second engaging member 20;

Page 11

wherein, while the first engaging member 32 engages the second engaging member 20 and the second engaging member 20 moves, the biasing mechanism 45, 46, 48, 52, 54 is capable of changing the location of the application of the biasing force from the first biasing location (FIG. 4) on the first engaging member 32 to a different second biasing location (FIG. 3, *i.e.*, a low tension, released position; Troiano 1:66-2:2) on the first engaging member 32 so that an engaging force applied between the first engaging member 32 and the second engaging member 20 when the biasing mechanism 45, 46, 48, 52, 54 applies the biasing force to the second biasing location (FIG. 3) is less than the engaging force applied between the first engaging member 32 and the second engaging member 20 when the biasing mechanism 45, 46, 48, 52, 54 applies the biasing force to the first biasing location.

As explained above, Troiano's apparatus is capable of performing the claimed function:

"wherein, while the first engaging member engages the second engaging member and the second engaging member moves, the biasing mechanism changes the location of the application of the biasing force from the first biasing location on the first engaging member to a different second biasing location on the first engaging member so that an engaging force applied between the first engaging member and the second engaging member when the biasing mechanism applies the biasing force to the second biasing location is less than the engaging force applied between the first engaging member and the second engaging member when the biasing mechanism applies the biasing force to the first biasing location;"

Troiano teaches the invention substantially as claimed. However, Troiano's biasing force (45) is not always applied to the first engaging member as the second engaging member moves through the entire range of operating movement of the second engaging member in the first and second directions.

Dal Pra teaches the biasing force 56 always applied to the first engaging member 32, 52 as the second engaging member 36 moves through the entire range of operating movement of the second engaging member 36 in the first and second (clockwise and counter clockwise) directions (FIGS. 2a-4b) in order to construct a more simple and cost effective apparatus 10. (Dal Pra 1:30-35; claims 1-20)

It would have been obvious to one having ordinary skill in the art at the time the invention was made to always apply the biasing force to Troiano's first engaging member as Troiano's second engaging member moves through the entire range of operating movement of Troiano's second engaging member in the first and second directions in order to construct Troiano's apparatus more simple and cost effective as taught or suggested by Dal Pra. *KSR*.

Claim 27

See claim 1 above. Further, note that Dal Pra teaches only the biasing force 56 biasing the first engaging member 32, 52 toward the second engaging member 36 being applied to the first engaging member 32, 52 in order to construct a more simple and cost effective apparatus.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use only the biasing force biasing the first engaging member toward the second engaging member being applied to the first engaging member in order to construct Troiano's apparatus more simple and cost effective as taught or suggested by Dal Pra. *KSR*.

10. Claim 1 and claim 28, as best understood, are rejected under 35 U.S.C. 103(a) as being unpatentable over Troiano in view of Campagnolo (US 5,791,195).

Claim 1

Troiano teaches an apparatus comprising:

a first engaging member 32;

a movable second engaging member 20 that moves in a first (released) direction and in a second (applied) direction opposite the first direction (FIGS. 3 and 5); wherein the first engaging member 32 engages the second engaging member 20; and

a biasing mechanism 45, 46, 48, 52, 54 (Troiano 3:1-14) that applies a biasing force (45) to bias the first engaging member 32 at a first biasing location (FIG. 4, i.e., a high tension, applied position; Troiano 2:3-5) on the first engaging member 32 so that the first engaging member 32 engages the second engaging member 20;

wherein, while the first engaging member 32 engages the second engaging member 20 and the second engaging member 20 moves, the biasing mechanism 45, 46, 48, 52, 54 is capable of changing the location of the application of the biasing force from the first biasing location (FIG. 4) on the first engaging member 32 to a different second biasing location (FIG. 3, i.e., a low tension, released position; Troiano 1:66-2:2) on the first engaging member 32 so that an engaging force applied between the first engaging member 32 and the second engaging member 20 when the biasing mechanism 45, 46, 48, 52, 54 applies the biasing force to the second biasing location (FIG. 3) is less than the engaging force applied between the first engaging member 32 and the second engaging member 20 when the biasing mechanism 45, 46, 48, 52, 54 applies the biasing force to the first biasing location.

As explained above, Troiano's apparatus is capable of performing the claimed function:

"wherein, while the first engaging member engages the second engaging member and the second engaging member moves, the biasing mechanism changes the location of the application of the biasing force from the first biasing location on the first engaging member to a different second biasing location on the first engaging member so that an engaging force applied between the first engaging member and the second engaging member when the biasing mechanism applies the biasing force to the second biasing location is less than the engaging force applied between the first engaging member and the second engaging member when the biasing mechanism applies the biasing force to the first biasing location;"

Troiano teaches the invention substantially as claimed. However, Troiano's biasing force (45) is not always applied to the first engaging member as the second engaging member moves through the entire range of operating movement of the second engaging member in the first and second directions.

Campagnolo teaches the biasing force 23 (FIG. 2) always applied to the first engaging member 20 as the second engaging member 21 moves through the entire range of operating movement of the second engaging member 21 in the first and second (clockwise and counter clockwise) directions in order to provide an easier and more convenient actuation to the cyclist/user. (Campagnolo 1:38-2:6)

It would have been obvious to one having ordinary skill in the art at the time the invention was made to always apply the biasing force to Troiano's first engaging member as Troiano's second engaging member moves through the entire range of operating movement of Troiano's second engaging member in the first and second directions in order to provide an easier and more convenient actuation to the cyclist/user as taught or suggested by Dal Pra. *KSR*.

Claim 28

See claim 1 above and note that Troiano's first engaging member 32 pivots around an axle 31 coupled to Troiano's first engaging member 32. In summary, Troiano teaches the invention substantially as claimed. However, Troiano does not teach *at least one of* the first biasing location *or* the second biasing location being positioned between the axle and the location where the first engaging member engages the second engaging member.

Campagnolo teaches the first or second biasing location (FIG. 2) being positioned between the axle 19 and the location where the first engaging member 20 engages the second engaging member 21 in order to provide an easier and more convenient actuation to the cyclist/user. (Campagnolo 1:38-2:6)

It would have been obvious to one having ordinary skill in the art at the time the invention was made to position Troiano's first or second biasing location between the axle and the location where the first engaging member engages the second engaging member in order to provide an easier and more convenient actuation to the cyclist/user as taught or suggested by Campagnolo. *KSR*.

11. Applicant's arguments filed June 22, 2010 have been fully considered but they are not persuasive.

The previous rejections under 35 USC 103 based on Troiano in view of Liu, and Liu in view of Shimano are withdrawn in view of Applicant's amendments to the claims. Applicant's arguments with respect to claims 1, 3-21, 23, 24, and 26-28 have been considered but are moot in view of the new ground(s) of rejection.

12. Applicant's amendment necessitated the new ground(s) of rejection presented in this

Office action. Accordingly, THIS ACTION IS MADE FINAL. See MPEP § 706.07(a).

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within TWO

MONTHS of the mailing date of this final action and the advisory action is not mailed until after

the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

however, will the statutory period for reply expire later than SIX MONTHS from the date of this

final action.

13. Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Vinh T. Luong whose telephone number is 571-272-7109. The

examiner can normally be reached on Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Richard Ridley can be reached on 571-272-6917. The fax phone number for the

organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR grant and the private PAIR of the pair of

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would

like assistance from a USPTO Customer Service Representative or access to the automated

information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Vinh T Luong/

Primary Examiner, Art Unit 3656